

## REMARKS

In the above-referenced Final Office Action the Examiner stated, "In view of applicant's amendment to amend the abstract to overcome the proper content, therefore, examiner has withdrawn the objection. However, Applicant is advised to submit the revised Abstract in a separated sheet of paper."

Applicant has submitted the revised Abstract on a separate sheet of paper, attached hereto, to comply with the Examiner's request. Also, applicant has amended some minor typographical errors found in the specification.

The Examiner further stated, "The corrected or substitute drawing were received on October 12, 2004. These drawing are accepted. Applicant is advised to submit new formal drawings including changes required by the proposed drawing correction filed on October 12, 2003, which has been approved by the examiner."

Attached hereto are new formal drawings of Figures 1-10 including the proposed drawing corrections approved by the Examiner.

Now turning to the more substantive issues, the Examiner rejected claims 2, 16, 30-31, 33, 35-36 and 38-39 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366).

To support this rejection the Examiner stated, "Referring to claims 33, 35-36 and 38-39, Topping et al. disclose a method, apparatus and a human machine interface (i.e. a fingernail identification system) (column 3 lines 33 to 40; see Figures 7-8), comprising:

A data transmitter (450) (i.e. a CCD or photodiode array sensor) for transmitting at least one data signal (i.e. a CCD data) based upon physical properties of at least one of said human nail (300) (i.e. a fingernail) and surrounding areas adjacent said human nail (340) (i.e. a finger) (column 6 lines 1 to 57; column 10 lines 1 to 35; see Figures 7 and 8); and

A validator controller (470) (i.e. a computer) connected to receive said at least one data signal (i.e. a digital signal from a CCD data), process information related to said at least one data signal and perform at least one action (i.e. any of several tasks) based upon processed information (column 10 lines 36 to 61; see Figure 8).

However, Topping et al. did not explicitly disclose a data transmitter in fixed contact with a human nail.

In the same field of endeavor of human nail identification system, North et al. teach that a data transmitter (20 or 60) (i.e. a portable scanner) in fixed contact with a human nail (11) (i.e. a fingernail surface when inserted into a portable scanner) (column 3 lines 59 to column 4 line 52; column 7 lines 51 to 67; see Figures 1 and 6) in order to obtain the best transmission strategy for transmitting a unique identification information of an individual data.

One of ordinary skilled in the art recognizes the need to have a data transmitter in fixed contact with a fingernail of North et al. in a CCD sensor assembly of a fingernail identification system of Topping et al. because Topping et al. suggest it is desired to provide that the physical and dimensional characteristics of the interface between nail bed and the underside of nail can be employed to uniquely identify individual and using a area-type charge coupled device sensor to integrate intensity value of individual pixels serially (column 6 lines 3 to 9; see Figures 7-8) and North et al. teach that a fingernail insert his fingernail into a receptacle for the scanner to read data information from his fingernail in order provide identification for access control environment. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to have a data transmitter in fixed contact with a fingernail of North et al. in a CCD sensor assembly of a fingernail identification system of Topping et al. with the motivation for doing so would have been to provide a CCD sensor assembly in contact with a fingernail for identification of individual for access control environment.

Referring to claim 2, Topping et al. in view of North et al. disclose the human machine interface of claim 33, Topping et al. disclose a direct physical connection element (462) (i.e. hard-wire signal line) between the validator receiver (460) and the data transmitter (450); wherein the data signal (i.e. a CCD data) is transmitted through the direct physical connection element (462) (column 6 lines 1 to 28; see Figure 8).

Referring to claim 16, Topping et al. in view of North et al. disclose the human machine interface of claim 33, North et al. disclose a recording device (31) (i.e. a reference computer), the recording device (31) configured to log specific events occurring within the human machine interface and associated devices (column 7 lines 35 to 50; see Figure 1).

Referring to claims 30 and 31, Topping et al. in view of North et al. disclose the human machine interface of claim 36, Topping et al. disclose wherein the data signal communicated from the data transmitter to the validator controller is a correlation between a first spatial point associated with the data transmitter and a second spatial point; wherein the first spatial point is adjacent a user's nail and the second spatial point is on a screened monitor (column 7 lines 28 to 52; see Figure 8)."

The Examiner is respectfully requested to reconsider his rejection based on the significant revisions to the claims and the following remarks.

Claim 19 has been incorporated into claims 33, 35-36 and 38-39, which calls for the data transmitter to be directly affixed to the human nail via an adhesive layer between the data transmitter and the human nail, such adhesive layer one of permanently and temporarily securing the data transmitter to the human nail (page 10 paragraph# [0039]). Claim 19 was indicated as allowable by the Examiner.

Further, claims 2 and 16 should be allowable since they depend from amended claim 33, and claims 30-31 should be allowable since they depend from amended claim 36.

The Examiner is therefore respectfully requested to withdraw his rejection of claims 2, 16, 30-31, 33, 35-36 and 38-39 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366).

The Examiner then rejected claims 4-6, 14, 17-18, 22 and 27-29 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33, and in further view of Scott et al. (US# 6,484,260). In support of this rejection the Examiner stated, "Referring to claims 4-5, Topping et al. in view of North et al. disclose the human machine interface of claim 33, however, Topping et al. in view of North et al. did not explicitly disclose further including a data transmitter power source powering said data transmitter.

In the same field of endeavor a biometric sensor system, Scott et al. disclose A data transmitter power source (i.e. power supply) powering the data transmitter (6) (i.e. a PID)

(column 5 lines 16 to 26; column 6 lines 29 to 40; column 8 lines 15 to 29; see Figures 1 and 4) in order to supply power to the data transmitter.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a power source to supply power to the personal identification device of Scott et al. in a fingernail identification system of Topping et al. in view of North et al. because using an power source would improve the reliable communication to identify an individual biometric that has been shown to be desirable in the personal identification system for providing secure access to a host facility includes a fingernail identification system of Topping et al. in view of North et al.

Referring to claims 6 and 27, Topping et al. in view of North et al. disclose the human machine interface of claims 33 and 36, Scott et al. disclose a validator emitter (40) (i.e. a transmitter module) configured to emit signals towards the data transmitter (6) (column 7 lines 15 to 23; column 10 line 58 to column 11 line 33; see Figures 1 and 7).

Referring to claim 14, Topping et al. in view of North et al. disclose the human machine interface of claim 6, Scott et al. disclose wherein the data transmitter (6) includes at least one capacitance plate (15) (i.e. a platen) secured to the human finger (i.e. when a human finger inserted into the portable scanner 60 of North et al.) ( column 6 lines 41 to 53; column 13 lines 5 to 12; see Figure 1).

Referring to claims 17-18, Topping et al. in view of North et al. disclose the human machine interface of claim 33, Scott et al. disclose further comprising: a data transmitter protective layer (44) (i.e. housing) covering and protecting the data transmitter (6); wherein the protective layer does not interfere with communication of data signals between the data transmitter (6) and the validator controller (30) (column 2 lines 44 to 63; column 8 lines 14 to 39; see Figures 4A to 4D).

Referring to claim 22, Topping et al. in view of North et al. disclose the human machine interface of claim 33, Scott et al. disclose wherein the data signal (41) is encrypted prior to

communication from the data transmitter (6) to the validator controller (30) (column 2 lines 15 to 39; column 7 lines 5 to 13; see Figure 1).

Referring to claim 28, Topping et al. in view of North et al. and Scott et al. disclose the human machine interface of claim 27, Topping et al. disclose further comprising: a directional reflector configured to reflect the signals from the validator emitter only when received at a predetermined angle; and an electronic shutter adjacent the directional reflector and configured to modulate the data signal; wherein the external signal is received through the electronic shutter and by the reflector, and the data signal is reflected and modulated by the data transmitter, towards the validator controller (column 7 lines 28 to 67; see Figure 8).

Referring to claim 29, Topping et al. in view of North et al. disclose the human machine interface of claim 36, Scott et al. disclose wherein the data transmitter (6) further comprises a nail digital chip (18) (i.e. a processor circuit for processing biometric), the nail digital chip (18) containing at least one computer program (column 7 lines 5 to 14; column 8 line 66 to column 9 line 7; column 13 line 5 to 11; see Figure 1)."

Claims 4-6, 14, 17-18 and 22 depend from amended independent claim 33, and claims 27-29 depend from amended independent claim 36, both independent claims now include the limitation of the data transmitter being one of permanently and temporarily affixed to the human nail via an adhesive layer. Therefore, the Examiner is respectfully requested to withdraw his rejection of claims 4-6, 14, 17-18, 22 and 27-29 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33, and in further view of Scott et al. (US# 6,484,260).

The Examiner then rejected claim 15 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) and Scott et al. (US# 6,484,260) as applied to claim 14, and in further view of Darrow et al. (US# 6,201,980). In support of this rejection the Examiner stated, "Referring to claim 15, Topping et al. in view of North et al. and Scott et al. disclose the human machine interface of claim 14, however, Topping

et al. in view of North et al. and Scott et al. did not explicitly disclose wherein said data transmitter further includes an inductor in communication with said at least one capacitance plate for emitting said at least data signal towards said validator controller.

In the same field of endeavor a biometric sensor system, Darrow et al. disclose the data transmitter (101 and 102) (i.e. assemblies of a micro electro mechanical system) includes an inductor (106) (i.e. a planar inductor coil) in communication with said at least one capacitance plate (105) (i.e. conductive membrane) for emitting data signals towards said validator controller (18) (i.e. a telemetry device) (see Figures 1 and 6) in order to transmit signals of a measurement of the concentration of a chemical analyte of interest.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using an inductor coupled to at least one capacitance plate and to transmit data signal to a telemetry device of Darrow et al. in a platen of a charge coupled device sensor connect to a transmitter module to transmit signals to a host system of Scott et al. in view of Topping et al. because using an inductor to configured to transmit data signal would improve the reliable communication to identify an individual biometric that has been shown to be desirable in the personal identification system for providing secure access to a host facility includes a biometric sensor device of Scott et al. in view of Topping et al."

Claim 15 finds its dependency back to amended claim 33 which now includes the limitation of the data transmitter being one of permanently and temporarily affixed to the human nail via an adhesive layer. Therefore, the Examiner is respectfully requested to withdraw his rejection of claim 15 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) and Scott et al. (US# 6,484,260) as applied to claim 14, and in further view of Darrow et al. (US# 6,201,980).

Also, the Examiner rejected claim 20 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33, and in further view of Cambier et al. (US# 6,532,298) stating, "Referring to claim 20, Topping et al. in view of North et al. disclose the human machine interface of claim 33, however, Topping et al. in view of North et al. did not explicitly disclose wherein the validator status actuator

communicates with a controllable device logic circuit in a controllable device, the control device logic circuit in communication with a controllable device and configured to control the controllable device.

In the same field of endeavor a biometric identification system, Cambier et al. disclose a validator status actuator (210) (i.e. a microprocessor in the imager 100) communicates with a controllable device logic circuit (960) (i.e. a microprocessor of a controller system 940) in a controllable device (940) (i.e. a controller system), the control device logic circuit (210) in communication with a controllable device (940) and configured to control the controllable device (940) (column 15 lines 50 to column 16 line 11; see Figure 12) in order to grant an access to the vehicle or asset and to initiates commands to unlock the vehicle.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize connecting a microprocessor in the imager to a microprocessor of a controller system to initiates commands of the vehicle of Cambier et al. in a host processing unit of a host system connects to a trusted third party to provides services for several host systems of Topping et al. in view of North et al. because using a circuitry of an imager to control the circuitry of a controller system would improve a convenient way to control commands of a device remotely that has been shown to be desirable in the personal identification system for providing secure access to a host facility of Topping et al. in view of North et al."

Claim 20 depends from amended claim 33 which now includes the limitation of the data transmitter being one of permanently and temporarily affixed to the human nail via an adhesive layer. Therefore, the Examiner is respectfully requested to withdraw his rejection of claim 20 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33, and in further view of Cambier et al. (US# 6,532,298).

Claim 21 was rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33, and in further view of Matchett et al. (US# 5,229,764). In support of this rejection, the Examiner stated, "Referring to claim 21, Topping et al. in view of North et al. disclose the

human machine interface of claim 33, however, Topping et al. in view of North et al. did not explicitly disclose further comprising a timer device in communication with one of the validator controller and the data transmitter and configured to associate a time with an event.

In the same field of endeavor a biometric authentication system, Matchett et al. disclose a timer device (120) (i.e. a timer circuit) in communication with one of the validator controller (100) (i.e. a system) and the data transmitter (C) (i.e. a biometric input signal) and configured to associate a time with an event (column 5 lines 16 to column 6 line 28; see Figure 1) in order to collect biometric input signal and compare with a reference data periodically and intermittently.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a timer circuit in a system of Matchett et al. in a host systems of Topping et al. in view of North et al. because using a timer circuit would improve a convenient way to control commands of a device remotely with time that has been shown to be desirable in the personal identification system for providing secure access to a host facility of Topping et al. in view of North et al."

Claim 21 depends from amended claim 33 which now includes the limitation of the data transmitter being one of permanently and temporarily affixed to the human nail via an adhesive layer. Therefore, the Examiner is respectfully requested to withdraw his rejection of claim 21 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33, and in further view of Matchett et al. (US# 5,229,764).

Finally, claims 23 and 40 were rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33 and in further view of Dixit et al. (US#6,449,472). The Examiner stated, "Referring to claim 23, Topping et al. in view of North et al. disclose the human machine interface of claim 33, however, Topping et al. in view of North et al. did not explicitly disclose further including a positioning system integrated with said human machine interface providing human machine interface location information to an external recipient.

In the same field of endeavor a biometric authentication system, Matched et al. disclose a positioning system (72) (i.e. global positioning system) integrated with the human machine interface (10) (i.e. system) and configured to provide human machine interface (10) location information to an external recipient (88) (i.e. dispatcher) (column 3 line 60 to 67; see Figure 1) in order to provide for remote assistance summoning of rescue authorities.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a global positioning system in a system of Dixit et al. in a host systems of Topping et al. in view of North et al. because using a global positioning system would provide a position of a system to control commands of a system remotely that has been shown to be desirable in the personal identification system of Topping et al. in view of North et al.

Referring to claim 40, Topping et al. in view of North et al. and in further view of Dixit et al. disclose the human machine interface of claim 23, Dixit et al. disclose wherein said positioning is a Global Positioning system (column 3 lines 40 to 54)."

Claims 23 and 40 depend from amended claim 33 which now includes the limitation of the data transmitter being one of permanently and temporarily affixed to the human nail via an adhesive layer. Therefore, the Examiner is respectfully requested to withdraw his rejection of claims 23 and 40 under 35 U.S.C. 103(a) as being unpatentable over Topping et al. (US# 5,751,835) in view of North et al. (US# 4,614,366) as applied to claim 33 and in further view of Dixit et al. (US#6,449,472).

Applicant gratefully acknowledges that claims 8-13, 34 and 37 have been allowed by the Examiner and, also, an indication by the Examiner of allowable subject matter in claims 3, 19 and 41-45. Applicant has drafted claims according to his indication of allowability.

The Examiner stated in his indication of allowable subject matter, "Claims 3, 19 and 41-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 3, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein the data transmitter includes at least one capacitance plate secured to said human nail for communicating with said validator controller via said direct physical connection element; and a circuit return conductor.

Referring to claim 19, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that an adhesive layer between the data transmitter and the human nail, the adhesive layer configured to non-permanently secure the data transmitter to the human nail.

Referring to claims 41, 43 and 45, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that wherein said at least one data signal transmitted is representative of a change in colorization of flesh under said human nail for verifying that an individual's finger having said data transmitter affixed to said human nail is pressing on a predetermined surface to indicate at least one of said individual wants to perform at least one of an action and transaction and to determine that said individual is alive.

Referring to claims 42 and 44, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that wherein said human machine interface further includes a power source for powering a timer device which periodically reads at least one of a pulse and approximate blood oxygen content via at least one of said human nail and said surrounding areas adjacent said human nail to verify at least one of connection of said human nail to a predetermined individual, said predetermined individual is still alive and whether said predetermined individual's pulse indicates that one of said predetermined individual is under duress and under a drugged state (column 6 lines 29 to column 7 line 27; see Figure 8)."

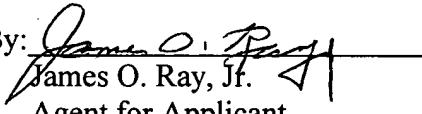
In conclusion, claims 2-6, 8-18, 20-23, 27-31 and 33-45 are still pending. Applicant believes that the subject application is allowable based on the above amendments to the

specification and claims as explicitly explained above. Applicant therefore respectfully requests that the application be passed to issue.

In the event further questions should arise, the Examiner is invited to contact the undersigned agent for applicant by telephone to resolve any remaining questions or issues by interview and/or Examiner's Amendment as to any matter that will expedite the completion of the prosecution of the subject application.

In addition, applicant would like to point out that a Revocation of Power of Attorney was mailed to the Patent Office on October 7, 2004. Applicant received a postcard date stamped by the Patent office October 12, 2004 acknowledging receipt thereof. Therefore, applicant respectfully requests that the Examiner send any future correspondence to the address below.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

application of: ) Group Art Unit: 2635  
T. Eric Chornenky ) Examiner: NAM V. NGUYEN  
Serial No.: 09/975,276 ) Attorney Docket: TEC 04039  
Filed: October 10, 2001 ) Date: April 12, 2005

For: HUMAN MACHINE INTERFACE

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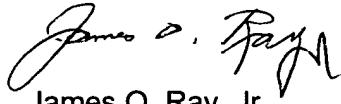
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**DRAWING TRANSMITTAL**

Sir:

Enclosed, herewith are seven (7) sheets of "Replacement Drawings" with respect to the above-referenced application.

Respectfully submitted,

  
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